

REMARKS

This Application has been carefully reviewed in light of the Office Action mailed October 28, 2009. At the time of the Office Action, Claims 1–12 were pending in this Application. Claims 1–12 were rejected. Claims 1, 4, 5, and 11 have been amended. In the present Response, the limitations of dependent Claim 3 have been incorporated into Independent Claim 1. Accordingly Claim 3 has been cancelled without prejudice or disclaimer. Independent Claim 11 has been amended simply to correct clerical matters.

Therefore, because the Examiner has previously examined the substantive limitations now recited in independent Claims 1, 11, and 12, if the Examiner proposes a new rejection of Claims 1, 11, and/or 12 based on *any new prior art reference(s)*, the rejection should be submitted in another *Non-Final* Office Action; a *Final* Office Action would be inappropriate for any rejection based on new art. *See* M.P.E.P. § 706.07(a) (stating that an action may not be made final “where the examiner introduces a new ground of rejection that is neither necessitated by applicant’s amendment of the claims, nor based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c) . . .”).

Applicants respectfully request reconsideration and allowance of all pending claims.

Claim Objections

Claims 1, 5 and 11 were objected due to the recitation of certain phrases, which the Examiner recommended be replaced with alternative language. Applicants have amended Claims 1, 5 and 11 accordingly.

Rejections under 35 U.S.C. § 102

Claims 1, 5–7, and 11 were rejected by the Examiner under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,399,955 issued to Richard W. Glaser et al. (“*Glaser*”). Applicants submit the cited art does not teach all of the elements of the amended claims, because the cited art does not show all the elements of the present claims.

For example, as the Examiner acknowledged, *Glaser* does not teach (explicitly or inherently) “a zero-crossing unit” as required by amended independent Claim 1. *See* Office

Action at 4 (“Glaser et al discloses the invention substantially as claimed except for a zero-crossing sensor.”). Because *Glaser* does not teach each element of amended independent Claim 1, that reference cannot anticipate amended independent Claim 1 or Claims 5–7 that depend from amended independent Claim 1.

In another example, *Glaser* does not teach “bridging the control coil as a function of the phase of the alternating current” as required by amended independent Claim 11. Further, the Examiner has failed to point to such a teaching in *Glaser* and has therefore failed to establish a prima facie case of anticipation of independent Claim 11.

For at least these reasons, Applicants request reconsideration and allowance of Claims 1, 5–7, and 11.

Rejections under 35 U.S.C. § 103

First, Claims 2 and 8–10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Glaser* in view of the Acknowledged Prior Art (“*APA*”).

Second, Claims 3–4 and 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Glaser* in view of U.S. Patent No. 4,151,427 issued to Lev V. Travin (“*Travin*”).

Applicants submit the cited art combinations, even if proper, which Applicants do not concede, do not render the claimed embodiment(s) of the invention obvious.

Regarding the rejection of Claims 1 and 8–10, because Claims 2 and 8–10 depend from amended independent Claim 1, the analysis can be short-circuited based on the explanation presented with regard to the Section 102 rejection of Claim 1 above. In that argument, Applicants explained that *Glaser* does not teach “a zero-crossing unit” as required by amended independent Claim 1. Further, Applicants’ have not acknowledged, in their specification or otherwise, that the prior art teaches “a zero-crossing unit” as required by amended independent Claim 1. The Examiner implicitly acknowledges this fact by not listing previously submitted dependent Claim 3 in this Section 103 rejection. Thus, each of Claims 2 and 8–10 are allowable over the proposed combination of *Glaser* and *APA* for at least the same reasons as stated above with respect to the Section 102 rejection of Claim 1.

Regarding the rejection of Claims 3–4 and 12, Applicants first point the Examiner to a clear explanation in *Travin* that effectively *teaches away* from a combination with *Glaser* and demonstrates that the proposed *Glaser-Travin* combination is improper. Specifically, *Travin* identifies problems—which Mr. Travin asserts that he solved with his alleged invention—with prior art approaches to identifying zero-crossings in high-voltage systems:

The [prior art] devices have a number of *serious disadvantages* which hamper their uses in high-voltage systems. First of all, these devices are complicated and incorporate a relatively great number of transistors and other elements, which affects their reliability. Such devices and consume much power. In such devices no provisions are made to ensure their immunity from powerful electromagnetic and electrostatic fields. Besides, in order to transmit information from the high potential to the ground potential, such devices require additional signal forming and converting means.

Travin, col.1, ll.27–39 (emphasis added). Further, *Travin* explains: “The invention further aims at providing an economical, interference-proof and fast-acting zero-crossing detector.” *Travin*, col. 2, ll.38–40. The advantages of *Travin* are completely lost if combined with *Glaser* as *Glaser* absolutely requires a direct connection to the high-voltage supply and includes a substantial number of digital components—which a person of ordinary skill in the art would understand to require a low voltage power supply and which are susceptible to interference. See *Glaser*, fig. 2 (illustrating controller 102 as comprising inductive controller 207 and connecting to high voltage line 107), fig. 3 (illustrating digital electronic components of inductive controller 207). Thus, the proposed combination of *Travin* and *Glaser* is improper because it defeats one of the central goals of *Travin*.

However, even if the combination is proper, which Applicants do not concede, the Examiner has failed to establish even a *prima facie* case of obviousness under Section 103. Claim 3 has been canceled. Amended Claim 4 depends from amended independent Claim 1, which was shown to be patentably distinct over *Glaser* above in reference to the Section 102 rejection. However, to the extent that the Examiner relies on features disclosed in the proposed *Glaser-Travin* combination, Applicants respectfully submit that such reliance is misplaced.

For example, amended independent Claim 1 recites, in part:

wherein the control unit has a zero crossing unit, which is connected to current sensors, in order to verify a zero crossing of the alternating current, and has at least one trigger unit which is connected to a trigger angle transmitter.

Yet, neither *Travin* nor *Glaser*, separately or in combination, discloses at least a *trigger unit which is connected to a trigger angle transmitter* as required by amended independent Claim 1. Further, the Examiner fails to address this feature anywhere in the Office Action, including the Examiner's discussion of former dependent Claim 3 (which recited this feature was prior to the amendments in this Response). Thus, on this record, the cited art cannot render obvious amended independent Claim 1 and therefore cannot render obvious amended dependent Claim 4, which depends from Claim 1. Moreover, by failing to address the "trigger unit" limitation, the Examiner has failed to make out a *prima facie* case of obvious.

Similarly, neither *Travin* nor *Glaser*, separately or in combination, discloses *triggering a switching device according to a trigger angle, which produces a trigger signal after a delay time corresponding to the trigger signal* as required by amended independent Claim 11. Again, the Examiner has not set forth even a *prima facie* case of obviousness as the Examiner fails to address the quoted feature anywhere in the Office Action, including the Examiner's discussion of previously presented independent Claim 12. Thus, on this record, the cited art cannot render obvious amended independent Claim 12.

Finally, neither *Travin* nor *Glaser*, separately or in combination, discloses *a trigger angle transmitter generating a trigger angle for the trigger unit, and which produces a trigger signal after a delay time corresponding to the trigger signal* as required by independent Claim 12. Again, the Examiner has not set forth even a *prima facie* case of obviousness as the Examiner fails to address this feature anywhere in the Office Action, including the Examiner's discussion of that claim. Thus, on this record, the cited art cannot render obvious amended independent Claim 12.

For at least these reasons, Applicants request reconsideration and allowance of amended Claim 4 and independent Claim 12.


CONCLUSION

Applicants have made an earnest effort to place this case in condition for allowance in light of the remarks set forth above. Applicants respectfully request reconsideration of the pending claims.

Applicants believe there are no fees due at this time, however, the Commissioner is hereby authorized to charge any fees necessary or credit any overpayment to Deposit Account No. 50-4871 of King & Spalding L.L.P.

If there are any matters concerning this Application that may be cleared up in a telephone conversation, please contact Applicants' attorney at 512.457.2031.

Respectfully submitted,
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